Value added tax

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THE VALUE ADDED TAX

Basil Zafiriou

Economics Division
Research Branch
Ottawa

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INTRODUCTION

In his document A New Direction for Canada, released on November 8, 1984, Finance Minister Michael Wilson announced that the merit of adopting a value added tax in Canada is currently under active consideration by the government. While this may represent the strongest official endorsement of a value added form of taxation, proposals for the adoption of such a tax are nothing new. The Carter Royal Commission on Taxation claimed that such proposals date back as far as 1917. The Carter Commission itself reviewed the VAT and came out against it.(1) More recently, the Federal Sales Tax Review Committee, appointed by Marc Lalonde in February 1983, gave the VAT a favourable review and recommended that the federal government study its adoption. The Wilson announcement is apparently a response to this recommendation.

The Wilson Statement noted that adoption of a value added tax in Canada is being considered within the context of replacing the current federal sales tax. The current federal sales tax in fact consists of several taxes: a general sales tax and a number of specific excise taxes and duties. The general sales tax rate was raised to 10% from 9% effective October 1, 1984. It is levied on all goods manufactured in Canada or

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(1) The Commission preferred a retail sales tax over VAT on the grounds that the latter would be more costly to administer. It recognized, however, that a sales tax would be easier to evade and that at high rates the incentive to evasion may be sufficiently strong to make VAT a preferred system of taxation. See Canada, Report of the Royal Commission on Taxation Vol. 5, (Ottawa, 1966), p. 44-53.

Table I

Sales and Excise Tax Rates

Item	1973	1981	1984
Sales tax			
General	12%	9%	10%
Building materials	11%	5%	6%
Gasoline	12%	12%	9%
Excisable goods	12%	9%	13%
Telecommunication programming services	-	-	6%
Excise taxes			
Automobiles	-	a	
Automobile air conditioners	-	$100/unit	$100/unit
Gasoline (motor and aviation) for personal use	-	1.5¢/litre	1.5/litre
Coin-operated games or amusement devices	10%	10%	10%
Jewellery	10%	10%	10%
Watches, clocks	10%	10%	10%
Lighters	10¢/device	10¢/device	10¢/device
Matches	10%	10%	10%
Playing cards	20¢/pack	20¢/pack	20¢/pack
Smokers accessories	10%	10%	10%
Wines			
Alcohol 1.2% or less	27½¢/gal.	a	a
Alcohol 1.2% to 7%	27½¢/gal.	a	a
Alcohol over 7%	55¢/gal.	a	a
Sparkling	$2.55/gal.	-	-
Cigarettes	3¢/5cig.	a	a
Manufactured tobacco	90¢/lb.	a	a
Cigars	17½%	20½%	20½%

a) Rates on wines are indexed as of 1981.

Source: Toronto: Canadian Tax Foundation, 1984 The National Finances, 1983-84.

imported into Canada. A reduced rate of 6% applies on building materials and a rate of 13% is imposed on alcohol and tobacco products. Exemptions are provided for certain classes of goods, including "necessities" (foodstuffs, clothing, prescription drugs) and production and pollution control equipment. Also exempt are certain classes of users such as hospitals, certified public institutions and provincial governments. Excise taxes of various rates are imposed on selected commodities such as jewellery, wine, tobacco products, certain high-energy consuming goods, and gasoline. Varying rates of excise duties are imposed on domestically produced beer, alcoholic spirits and tobacco products. (see Table I)

Since the VAT is being viewed in Canada as a possible replacement for the federal sales tax system, in considering the merits of adopting a VAT, this paper will compare its possible effects against those of the current federal sales taxes. The comparison is made in the third part of the paper. The second part reviews briefly how a VAT system might work.

WHAT IS A VALUE ADDED TAX

A VAT, as the name implies, is a tax imposed on the value that a business adds during the course of its operations to the goods or services it sells. The tax is levied at every stage in the production/distribution process, or more precisely every time that a sale is made in that process until the commodity reaches the final consumer. Double taxation is avoided, however, by taxing in each transaction only that sales value which accrued in the production stage immediately before the transaction. For example, a manufacturer who pays \$X for his inputs and then sells his product to a wholesaler for \$Y is taxed on \$(Y-X). In practice, what happens in most countries where VAT has been adopted is that the seller charges the purchaser a tax on the total value of the sale but claims a credit from the government for the tax he paid in his purchase. This credit method of collection is illustrated with a hypothetical example in Table II.

Table II

How Vat Works

(10% rate)

Stage of Production	PURCHASE			SALE				VAT	
	Price paid for goods	VAT	Total	"Value Added"	Price Charged	VAT collected	Total	Credit for VAT paid	Net to Government
Lumberjack chops the wood	-	-	-	$100	$100	$10	$110	-	$10
Sawmill saws the wood	$100	$10	$110	50	150	15	165	$10	5
Furniture maker assembles the wood into a table	150	15	165	100	250	25	275	15	10
Distributor retails the table	250	25	275	50	300	30	330	25	5
Retail customer buys the table	300	30	330	-	-		-		-
TOTAL				$300					$30

Source: Price Waterhouse & Co., Value Added Tax, (New York, 1979) p. 4.

In effect, the VAT is equivalent to a retail sales tax levied on the same aggregate tax base. As the illustration in Table II shows, while every business along the production/distribution chain pays the tax on the full value of its purchase, it receives a credit for taxes already paid on previous transactions up to that point. Hence at the final stage, when the product is sold to the consumer, the aggregate VAT raised on that product is equal to the retail sales value of the product times the applicable VAT rate. Thus returning to the illustration in Table II, a 10% VAT has raised $30 on a wooden table with a retail sales value of $300.00. The $30 amount is the aggregate raised from all the producers along the production chain: $10 from the lumberjack, $5 from the sawmill, $10 from the furniture maker and $5 from the retailer. The same amount of course could be obtained by a 10% retail sales tax on the $300 table. Since we already do have retail sales taxes in Canada, the VAT does not therefore represent a new tax but a new way of collecting taxes.

To be precise, the statement that the VAT is equivalent to a single-stage retail sales tax is strictly true for the consumption type VAT only. Under a consumption type VAT, purchases of capital goods are treated in the same way as purchases of intermediate goods - they are deducted immediately from gross sales in computing taxable value added. If only the depreciation on capital goods were offset against sales, the resulting tax base would equal income rather than consumption, and the VAT would be equivalent to a flat rate personal income tax rather than to a sales tax.(1) Since in Canada a VAT system is considered as a substitute for the various sales taxes in existence, our discussion in this paper is confined to a consumption type VAT.

While conceptually the VAT is fairly simple, in practice it can be very complex. This is because in practice a VAT is rarely applied at

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(1) When investment is immediately deductible, it is not taxed. Hence, in such a case, the VAT is a tax on consumption only. When only depreciation is deductible, then investment as well as consumption is taxed. Since investment equals savings, and savings plus consumption equal income, a VAT that does not exclude investment from taxation is in effect equivalent to an income tax.

a single rate on all goods and services. "Luxury" items are usually taxed at higher rates, "necessities" bear a reduced rate (often zero), and some activities are exempt altogether.

ECONOMIC AND DISTRIBUTIONAL EFFECTS

Evaluation of any tax system will involve a number of factors. Most important among these are equity and efficiency. The first refers to the distributional impact of the tax on individuals of different income classes. The second refers to the impact on production and consumption patterns, and hence on the allocation of resources. Ease of administration and compliance is also an important consideration.

A. Equity

It is generally assumed that the value added tax is borne by the consumer. This makes VAT regressive, meaning that it has a greater impact on the poor than the wealthy. The VAT is set at a certain percentage of the value of a commodity. Hence all consumers pay the same tax on the amount spent on a commodity. Since the poor generally spend a higher proportion of their income on consumption, they would spend a higher proportion of their income on VAT than would higher income individuals.

Of course this is a common characteristic of all consumption taxes. In particular it holds for existing sales taxes as well. Moreover, it is possible to mitigate the regressivity of the VAT by maintaining existing tax exemptions on necessities or applying lower VAT rates to them. It has been shown that small adjustments are sufficient to redress any additional regressivity that a VAT might introduce. Ireland is a good case in point. There "the substitution of a 15% VAT for the existing sales taxes... would be regressive. But if excises on alcohol and tobacco were reduced at the same time, though prices still increase (by 8% to 11%) the

increases bear more heavily on high income households than low ones."[1] In fact, with sufficient correction, the VAT substitution for the existing sales taxes could be turned into a progressive change.

The multiplicity of rates and exemptions which riddle the current sales tax system and the fact that taxes are levied at an early stage of production only also imply that the present system violates horizontal equity,[2] since same-income individuals but with different preferences for goods pay different taxes. A VAT with multiple rates and exemptions would also violate horizontal equity, but probably to a lesser degree because a) it will probably be more comprehensive and b) its incidence is not affected by the method of production (under the present method of taxation, goods with a relatively high value added beyond the manufacturing stage are taxed relatively less).

B. Efficiency

Every tax - with the exception of a head tax, which cannot be avoided short of leaving a jurisdiction - has an allocative effect, which is to say that it yields an economic outcome which is different from that which would result had the tax not been imposed. A tax on restaurant meals, for example, tends to shift eating habits away from eating out, a tax on income provides an inducement to reduce the supply of labour, and a tax on capital tends to reduce savings. This distortion of economic behaviour constitutes an excess burden of taxation over and above the direct burden represented by the tax revenue actually raised. An objective of any sound tax system, therefore, is that it be as neutral as possible in its impact on the allocation of society's resources.

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(1) Alan A. Tait, Value Added Tax (London: McGraw-Hill Book Co. Ltd., 1972), p.85.

(2) Most simply put, horizontal equity requires that "equals should be treated equally", or more precisely, that people equally well-off before taxes should remain equally well-off after the taxes are imposed.

A major advantage of the value added tax over a conventional sales tax is that the VAT tends to be more neutral in its impact on production and consumption. That is, a VAT, except for deliberate exemptions and rate variations, applies equally to all goods and services, regardless of the way a good or service is produced or distributed. It does not therefore distort decisions on where consumers spend their incomes or how firms organize production.

To appreciate the advantage of VAT's neutrality for efficiency consider by contrast the effect of conventional sales taxes on production. Because sales taxes levied at one level of production are not integrated with taxes levied at others levels, they can have an arbitrarily discriminatory impact on different forms of doing business. For example, a sales tax applied at every stage of production (i.e. a turnover or cascade tax), will impose higher levies on a commodity the greater the number of stages through which the commodity progresses in the production/distribution process. A producer can therefore minimize taxes paid in a commodity by integrating several production stages within one firm. The choice of business organization therefore will be affected by tax considerations rather than simply the inherent cost advantages in the form of production chosen. To illustrate, the current federal sales taxes are imposed at the manufacturer level in the case of domestically produced goods. This provides an incentive for producers to push forward as many functions (e.g. advertising, assembly) as possible so as to minimize the base on which taxes are applied. A VAT, by taking into account the tax already paid on the inputs to a production process, eliminates such distortions.

The present system creates similar distortions on the consumption side, since the ratio of tax to final selling price is not the same for all taxable goods. Robin Boadway and Harry Kitchen illustrate this point with the following example:

> Suppose the manufacturer of a product sells it to a wholesaler for $100 plus the 9 per cent manufacturers' sales tax. The wholesaler and retailer follow the pricing principle of cost plus 25 per cent. As a

> result, the wholesaler pays \$109 for the taxed item and sells it for \$136.25 to the retailer who in turn sells it to the final user for \$170.31. The ratio of tax to final selling price is 5.3 per cent (\$9/\$170.31). However, if the distributor's markup had been 40 per cent the final selling price would have been \$213.64, yielding a ratio of tax to final selling price of 4.2 per cent (\$9/\$213.64). Clearly then, the exclusion from the tax base of the wholesaler's and retailer's markup margins causes variations in the effective tax rates, discriminating in favour of those items with higher margins.(1)

It has been argued that the current federal sales tax system may also discriminate against domestically produced goods in favour of imports. This is because while imported goods

> "flow through wholesalers and are taxed on the wholesalers' acquisition cost, Canadian manufacturers now sell a large proportion of their goods directly to retailers (and users), and those goods are taxed on their sale price to retailers (and users). Marketing costs incurred by wholesalers at the wholesale level are generally not taxed although similar costs incurred by manufacturers who sell directly to retailers are taxed. Imported goods may enjoy a tax advantage over domestically-produced goods because advertising, warranty, and other marketing costs incurred in Canada, which are typically included in the taxable value of domestic goods, may not be reflected in the taxable value of imports. Inward freight costs incurred by domestic manufacturers on their raw materials are an element of the manufacturer's sale price and thus taxed, but comparable freight costs incurred in delivering imported fully manufactured goods to Canada are generally not included in the value on which the tax on imported goods is calculated".(2)

Under a VAT system such difficulties would be eliminated. Because a VAT is intended to tax all domestic consumption, imports would

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(1) Robin W. Boadway and Harry M. Kitchen, Canadian Tax Policy, second ed. (Toronto: Canadian Tax Foundation, 1984), p. 275.

(2) Canada, Department of Finance, Proposal to Shift the Federal Sales Tax to the Wholesale Trade Level, (Ottawa, April 1982), p. 3-4.

also be subject to VAT to equalize tax burdens with those on domestically produced goods. The stage at which a VAT on imports is applied does not matter to the final tax-levy outcome. Recall that under a VAT system, the VAT rate is applied on the total sales value of a commodity at each stage and taxes payable are then offset by a credit for taxes already paid. Hence, if certain costs of doing business are not included in the border price of an import and are not therefore taxed at that stage, they will be taxed at a later stage in the distribution process. Thus domestic and foreign products are placed on an equal footing with respect to domestic consumers.

Incidentally, a VAT also makes it easier to rebate taxes paid on goods destined for export, so that exports are not disadvantaged by the domestic tax structure. GATT regulations, which forbid subsidies to exporters, do permit remission of indirect taxes. Remitting existing sales taxes, however, is difficult because of the difficulty of accurately calculating the tax content in the price of these goods. With a VAT on the other hand, an accurate record of taxes paid on a commodity is an inherent part of the system, since taxes assessed at every stage in the production/distribution chain are reduced by taxes already paid. Every purchaser along the chain therefore has an incentive to ensure that his invoices fully reflect taxes already paid on the goods and services he buys.

Finally, the allocative distortions of the existing sales taxes that have been outlined thus far are generated by the present methods of collection. Additional distortions arise from the structure of these taxes, and in particular from the non-uniform treatment of all goods and services. As we've already seen, there is substantial variation in the tax rates applicable to different commodities, some goods are subject to more than one tax and some are exempt from taxes altogether. All services are also exempt from the federal sales taxes. Of course similar variations may be introduced in a VAT system as well, and for reasons of equity (as outlined above) or administrative feasibility (most services in the EEC for

example are exempt from VAT)(1) some variability in rates and some exemptions will also be a feature of any VAT system that might be adopted.

C. Administration and Compliance

Although no major tax in a complex society is easy to administer, the current federal sales taxes are probably easier to administer than most. The number of reporting units is relatively small, the typical taxpayer is large, and record-keeping is probably sophisticated and satisfactory. These conditions tend to make administration and enforcement a relatively easy matter. On the other hand, the multiplicity of rates and exemptions undoubtedly complicate the process.

Substituting a VAT for the present federal sales tax system would probably increase the burden of administration and compliance. Since the tax would be collected incrementally at every stage along the production/distrubution chain, down to the consumer level, the number of taxpaying units would rise substantially. Each taxpayer would be required to keep full records in respect of both purchases and sales to substantiate tax deductions for taxes paid by predecessors in the chain. In many cases, including exempt goods and exports, taxes already paid will exceed liabilities and tax authorities will have to process tax refunds. And of course the less uniform is the VAT across commodities and producers, the more complex and costly administration will be.

The heavy record-keeping requirements that a VAT would generate do yield one advantage: they help reduce the incidence of tax evasion. Every taxpayer along the production/distribution chain has an incentive to ensure that his predecessor has correctly invoiced the amount of taxes paid so that he can in turn reduce the tax liabilities on his sales. A VAT system therefore is largely self-enforcing.

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(1) Exemption of services does not mean that all services would escape taxation. In particular, services to firms would be taxed to the extent that they add to the value of taxable goods produced. However, services directly provided to consumers (banking services for instance) would escape taxation.

SUMMARY

The adoption of a value added tax has often been proposed in Canada as an alternative to the federal sales tax. This paper reviewed the workings of a consumption-type VAT and compared its probable effects with those of the current federal sales tax system. On the whole, a VAT would be superior to the current sales tax on equity and efficiency grounds. This is because taxes payable under a VAT are the same proportion of the final sales price regardless of the production and distribution method chosen. A VAT therefore avoids distortions on production and consumption patterns that the present sales tax tends to generate. A VAT would also remove the tax disadvantage faced by domestically manufactured products relative to imported goods under the existing sales tax regime. On the negative side, a VAT system would probably increase the present burden of compliance by taxpayers and administration costs by tax authorities.

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